

**REMARKS**

Claims 1-19 are pending in the subject application. Claims 1, 6, 10-14, and 17 are amended. Claims 1, 6, 10-14 and 17 are independent. Claims 1-19 are presented to the Examiner for further consideration on the merits.

Applicants note with appreciation the Examiner's acceptance of the original drawings filed on September 8, 2003.

**A. Introduction**

In the outstanding Office Action Made Final, the Examiner rejected claims 1, 5, 6, 8, 10, 14, and 16-18 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,993,314 to Lim et al. (hereinafter referred to as "the Lim et al. reference") in view of U.S. Patent Application Publication No. 2003/0114129 to Jerng (hereinafter referred to as "the Jerng reference") and U.S. Patent No. 6,215,988 to Matero (hereinafter referred to as "the Matero reference"); rejected claims 2, 3, 9, and 15 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference, the Jerng reference, the Matero reference, and further in view of U.S. Patent No. 5,929,716 to Komori et al. (hereinafter referred to as "the Komori et al. reference"); rejected claims 4 and 7 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference, the Jerng reference, the Matero reference, and further in view of U.S. Patent No. 5,929,708 to Davis et al. (hereinafter referred to as "the Davis et al. reference"); rejected claims 11, 12, and 19 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference in view of the Komori et al. reference; and rejected claim 13 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference in view of the Jerng reference.

B. Asserted Obviousness Rejection of Claims 1, 5, 6, 8, 10, 14, and 16-18

In the outstanding Office Action Made Final, the Examiner rejected claims 1, 5, 6, 8, 10, 14, and 16-18 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference in view of the Jerng reference and the Matero reference. Claims 1, 6, 10, 14 and 17 have been amended, and are believed to be allowable for at least the following reasons.

As amended, independent claims 1, 6, and 10 recite, in part, an apparatus having “a voltage controlled oscillator including a varactor.” The phase locked loop of this apparatus generates a control voltage, “input to the varactor,” for controlling the frequency of the signal output from the voltage controlled oscillator. Support for these added limitations may be found in the specification, for example, on Page 19, ¶0049. As noted throughout the specification, for example, on Page 27, ¶0072, it is possible to easily change the operating frequency within a multiband apparatus using such a varactor, i.e., a voltage controllable capacitor.

It is respectfully submitted that none of the references relied upon suggest, much less disclose, the use of a varactor as now recited in independent claims 1, 6, and 10. In particular, the reference generator circuitry 218 in the Lim et al. reference, noted by the Examiner in the Advisory Action, may input a reference frequency to PLL circuitry 840/843. On the other hand, the present invention outputs a control voltage to a varactor of a voltage controlled oscillator, which, in turn, changes the oscillation frequency of the voltage controlled oscillator, as now clearly recited in independent claims 1, 6, and 10.

For at least these reasons, applicants respectfully submit that the Lim et al. reference, the Jerng reference, and the Matero reference, individually or in combination, fail to disclose or suggest all of the elements as recited in independent claims 1, 6, and 10. Accordingly, applicants respectfully request that the rejection of claims 1, 6, and 10 under 35 U.S.C. § 103(a) be

withdrawn. Since claims 5 and 8 are patentable at least by virtue of their respective dependency from claims 1 and 6, applicants respectfully request that the rejections of claims 5 and 8 under 35 U.S.C. § 103(a) also be withdrawn.

Claims 14 and 17 are directed to data receiving methods including, in part, receiving signals output from “a voltage controlled oscillator including a varactor and generating a control voltage, input to the varactor, that controls the frequency of the signal output from the voltage controlled oscillator.” Similar to the apparatus claims discussed above, viz., claims 1, 6 and 10, applicants respectfully submit that the Lim et al. reference, the Jerng reference, and the Matero reference, individually or in combination, fail to disclose or suggest all of the elements as recited in independent claims 14 and 17.

Accordingly, applicants respectfully request that the rejections of claims 14 and 17 under 35 U.S.C. § 103(a) be withdrawn. Since claims 16 and 18 are patentable at least by virtue of their respective dependencies from independent claims 14 and 17, applicants respectfully request that the rejection of claims 16 and 18 under 35 U.S.C. § 103(a) also be withdrawn.

C. Asserted Obviousness Rejection of Claims 2, 3, 9, and 15

In the outstanding Office Action Made Final, the Examiner rejected claims 2, 3, 9, and 15 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference, the Jerng reference and the Matero reference in view of the Komori et al. reference. Applicants respectfully traverse this rejection for at least the following reasons.

As discussed in section B above, the Lim et al. reference, the Jerng reference and the Matero reference, individually or in combination, fail to disclose or suggest all of the elements of the apparatuses as claimed in independent claims 1 and 6, and all of the steps of the method as claimed in independent claim 14. Applicants respectfully submit that the Komori et al. reference

fails to compensate for the deficiencies of the Lim et al. reference, the Jerng reference and the Matero reference as applied to claims 1, 6, and 14. For at least these reasons, applicants respectfully submit that the Lim et al. reference, the Jerng reference, the Matero reference and the Komori et al. reference, individually or in combination, fail to disclose or suggest all of the elements of the apparatuses as claimed in independent claims 1 and 6, and all of the steps of the method as claimed in independent claim 14.

Since claims 2 and 3 are patentable at least by virtue of their dependency on claim 1, applicants respectfully request that the rejection of claims 2 and 3 under 35 U.S.C. § 103(a) be withdrawn.

Since claim 9 is patentable at least by virtue of its dependency on claim 6, applicants respectfully request that the rejection of claim 9 under 35 U.S.C. § 103(a) be withdrawn.

Since claim 15 is patentable at least by virtue of its dependency on claim 14, applicants respectfully request that the rejection of claim 15 under 35 U.S.C. § 103(a) be withdrawn.

D. Asserted Obviousness Rejection of Claims 4 and 7

In the outstanding Office Action Made Final, the Examiner rejected claims 4 and 7 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference, the Jerng reference and the Matero reference in view of the Davis et al. reference. Applicants respectfully traverse this rejection for at least the following reasons.

As discussed in section B above, the Lim et al. reference, the Jerng reference, and the Matero reference, individually or in combination, fail to disclose or suggest all of the elements of the apparatuses as claimed in independent claims 1 and 6. Applicants respectfully submit that the Davis et al. reference fails to compensate for the deficiencies of the Lim et al. reference, the Jerng reference and the Matero reference as applied to claims 1 and 6.

For at least these reasons, applicants respectfully submit that the Lim et al. reference, the Jerng reference, the Matero reference, and the Davis et al. reference, individually or in combination, fail to disclose or suggest all of the elements of the apparatuses as claimed in independent claims 1 and 6.

Since claim 4 is patentable at least by virtue of its dependency on claim 1, applicants respectfully request that the rejection of claim 4 under 35 U.S.C. § 103(a) be withdrawn.

Since claim 7 is patentable at least by virtue of its dependency on claim 6, applicants respectfully request that the rejection of claim 7 under 35 U.S.C. § 103(a) be withdrawn.

E. Asserted Obviousness Rejection of Claims 11, 12, and 19

In the outstanding Office Action Made Final, the Examiner rejected claims 11, 12, and 19 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference in view of the Komori et al. reference. Applicants respectfully traverse this rejection for at least the following reasons.

As amended, independent claims 11 and 12 recite, in part, an apparatus having “a voltage controlled oscillator including a varactor.” The phase locked loop of this apparatus generates a control voltage, “input to the varactor,” for controlling the frequency of the signal output from the voltage controlled oscillator. Support for these added limitations may be found in the specification, for example, on Page 19, ¶0049.

For at least the reasons analogous to those discussed above in section B above, the Lim et al. reference fails to disclose or suggest an apparatus as recited in claims 11 and 12. Applicants respectfully submit that the Komori et al. reference, as applied to claims 11 and 12, fails to compensate for all of these deficiencies. For at least these reasons, applicants respectfully submit that the Lim et al. reference and the Komori et al. reference, individually or in

combination, fail to suggest, much less disclose, all of the element of an apparatus as claimed in independent claims 11 and 12. Accordingly, applicants respectfully request that the rejection of claims 11 and 12 under 35 U.S.C. § 103(a) be withdrawn.

As also discussed in section B above, the Lim et al. reference fails to disclose or suggest all of the steps of the data transmitting method as claimed in independent claim 17. Applicants respectfully submit that the Komori et al. reference fails to compensate for the deficiencies of the Lim et al. reference as applied to claim 17. Since claim 19 is patentable at least by virtue of its dependency on claim 17, applicants respectfully request that the rejection of claim 19 under 35 U.S.C. § 103(a) be withdrawn.

F. Asserted Obviousness Rejection of Claim 13

In the outstanding Office Action Made Final, the Examiner rejected claim 13 under 35 U.S.C. § 103(a) as being unpatentable over the Lim et al. reference in view of the Jerng reference. Applicants respectfully traverse this rejection for at least the following reasons.

As amended, independent claim 13 recites, in part, an apparatus having “a voltage controlled oscillator including a varactor.” For at least the reasons analogous to those discussed above in section B in regard to claim 1, applicants respectfully submit that the Lim et al. reference and the Jerng reference, individually or in combination, fail to disclose or suggest any and all of the elements as claimed in claim 13. Accordingly, applicants respectfully request that the rejection of claim 13 under 35 U.S.C. § 103(a) be withdrawn.

G. Conclusion

If the Examiner believes that additional discussions or information might advance the prosecution of the instant application, the Examiner is invited to contact the undersigned at the telephone number listed below to expedite resolution of any outstanding issues.

In view of the foregoing amendments, reconsideration of this application is earnestly solicited, and an early and favorable further action upon all the claims is hereby requested.



Respectfully submitted,

LEE & MORSE, P.C.

Date: November 30, 2006

  
/ Eugene M. Lee, Reg. No. 32,039

LEE & MORSE, P.C.  
3141 FAIRVIEW PARK DRIVE  
SUITE 500  
FALLS CHURCH, VA 22042  
703.207.0008 TEL  
703.207.0003 FAX

PETITION and  
DEPOSIT ACCOUNT CHARGE AUTHORIZATION

This document and any concurrently filed papers are believed to be timely. Should any extension of the term be required, applicant hereby petitions the Director for such extension and requests that any applicable petition fee be charged to Deposit Account No. 50-1645.

If fee payment is enclosed, this amount is believed to be correct. However, the Director is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-1645.

Any additional fee(s) necessary to effect the proper and timely filing of the accompanying papers may also be charged to Deposit Account No. 50-1645.